

October 6, 1986

Docket No. 50-400

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Mr. E. E. Utley, Senior Executive Vice President
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Post Office Box 1551
Raleigh, North Carolina 27602

Dear Mr. Utley:

Subject: Environmental Assessment of Exemption Request Relating to 10 CFR 50,
Appendix J for Shearon Harris, Unit 1

Enclosed is a copy of a "Notice of Environmental Assessment and Finding of No Significant Impact" for your information. This notice relates to your request dated June 2, 1986, in which you requested an exemption from the requirements of 10 CFR 50, Appendix J, Paragraph III.D.2(b), which details three explicit air lock testing requirements.

The notice has been forwarded to the Office of the Federal Register for publication.

Sincerely,

Bart C. Buckley
Bart C. Buckley, Senior Project Manager
PWR Project Directorate #2
Division of PWR Licensing-A
Office of Nuclear Reactor Regulation

Enclosure:
As stated

cc w/enclosure:
See next page

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UNITED STATES NUCLEAR REGULATORY COMMISSION
CAROLINA POWER AND LIGHT COMPANY
NORTH CAROLINA EASTERN MUNICIPAL POWER AGENCY
DOCKET NO. 50-400
NOTICE OF ENVIRONMENTAL ASSESSMENT AND
FINDING OF NO SIGNIFICANT IMPACT

The U.S. Nuclear Regulatory Commission (the Commission) is considering issuance of an exemption from the requirements of Appendix J, Section III.D.2(b) to 10 CFR Part 50 to Carolina Power and Light Company, and North Carolina Eastern Municipal Power Agency (the applicants), for the Shearon Harris Nuclear Power Plant, Unit No. 1, located in Wake and Chatham Counties, North Carolina.

ENVIRONMENTAL ASSESSMENT

Identification of Proposed Action:

The exemption from 10 CFR 50, Appendix J, Paragraph III.D.2(b) would allow the applicant to use an alternate method of testing the containment air locks in order to verify that containment integrity is maintained. The alternate method of testing proposed by the applicant is endorsed by the NRC in the Standard Technical Specifications for Westinghouse Pressurized Water Reactors (NUREG-0452). This proposed action is responsive to the applicants' request for an exemption dated June 2, 1986.

The Need for the Proposed Action:

The underlying purpose of Paragraph III.D.2(b) of Appendix J to 10 CFR 50 is to verify that containment integrity is maintained. This regulation details three explicit air lock testing requirements which are also required to be in the Technical Specifications. With one exception, Technical Specification 4.6.1.3.a, b.1 and b.2 correspond to the Appendix J requirements.

Technical Specification 4.6.1.3.b.1 requires that the containment air locks be demonstrated operable by conducting a leakage test every six months, when containment integrity is required, by pressurizing the interior of the air lock to P_a (the calculated peak containment internal pressure under design basis accident conditions, 41 psig for the Shearon Harris Nuclear Power Plant) and verifying that the leakage rate is within the limit specified in the Technical Specifications. This is in compliance with 10 CFR 50, Appendix J, Paragraph III.D.2(b)(i).

Paragraph III.D.2(b)(iii) of Appendix J to 10 CFR 50 requires air locks to be tested within three days after being opened (or at least once every three days when the air lock is being used and more frequent for multiple entries every three days) and specifies that air lock seal tests satisfy the three day test requirements. Technical Specification 4.6.1.3.a corresponds to and complies with this requirement of Appendix J.

Paragraph III.D.2(b)(ii) of Appendix J to 10 CFR 50 requires that "Air locks opened during periods when containment integrity is not required by the plant's Technical Specification shall be tested at the end of such periods at not less than P_a ." In lieu of this requirement, Technical Specification 4.6.1.3.b.2 requires that an overall air lock leakage test be conducted at P_a when maintenance has been performed on the air lock that could affect the air lock sealing capability. The Standard Technical Specifications contain a footnote stating that this requirement is an exemption to Appendix J of 10 CFR 50.

The periodic six month test of paragraph III.D.2(b)(i) of Appendix J to 10 CFR 50 and the three day test requirement of paragraph III.D.2(b)(iii) of Appendix J to 10 CFR 50 provide assurance that the air lock is properly engaged and sealed. When no maintenance has been performed on the air lock that could

affect its sealing capability, and the air lock is properly sealed, there should be no reason to expect the air lock to leak excessively just because it has been opened during cold shutdowns and refueling outages. Whenever maintenance that could affect the sealing capability has been performed, the test will still be required. Therefore, the potential for leakage would not change nor increase if the test is only performed after maintenance has been performed on the air lock that could affect its sealing capability. An exemption from paragraph III.D.2(b)(ii) of Appendix J to 10 CFR 50 is requested since the present Technical Specifications provide equivalent protection of containment integrity. The Commission has granted this exemption on other plants with designs similar to the Shearon Harris Nuclear Power Plant and it is consistent with current regulatory practice and policy.

Environmental Impacts of the Proposed Action:

The proposed exemption would permit the substitution of an air lock seal leakage test (Paragraph III.D.2(b)(iii) of Appendix J, 10 CFR Part 50) for the full pressure air lock test otherwise required by Paragraph III.D.2(b)(ii) when the air lock is opened while the reactor is in a cold shutdown or refueling mode. If the tests required by III.D.2(b)(i) and (iii) are current, with no maintenance having been performed on the air lock and with it properly sealed, this exemption will not affect containment integrity and does not affect the risk of facility accidents. Thus, post-accident radiological releases will not be greater than previously determined nor does the proposed exemption otherwise affect radiological plant effluents, nor result in any significant occupational exposure. Likewise, the exemption does not affect non-radiological plant effluents and has no other environmental impact. Therefore, the Commission concludes that there are no significant radiological or non-radiological environmental impacts associated with the proposed exemption.

Alternatives to the Proposed Action:

The principal alternative to the proposed action would be to deny the requested exemption. Such an action would require the applicant to use a cumbersome and unwarranted test method, or a major design change would be required in order to permit the inner door to withstand full containment pressure in the test direction without strong backs. If design changes were warranted, a corresponding delay in commercial operation of the Shearon Harris Nuclear Power Plant would be required, and this delay would cause the cost of the unit to increase by a significant amount.

Alternative Use of Resources:

This action does not involve the use of resources not previously considered in the Final Environmental Statement for the Shearon Harris Nuclear Power Plant, dated October 1983.

Agencies and Persons Consulted:

The NRC staff did not consult with any other agencies or persons.

FINDING OF NO SIGNIFICANT IMPACT

Based upon the foregoing environmental assessment, we conclude that the proposed action will not have a significant effect on the quality of the human environment. The Commission has, therefore, determined not to prepare an environmental impact statement for the proposed exemption.

For further details with respect to this action, see the application for exemption dated June 2, 1986, which is available for public inspection at the Commission's Public Document Room, 1717 H Street, N.W. Washington, DC, and at the Wake County Public Library, 104 Fayetteville Street, Raleigh, North Carolina 27601.

Dated at Bethesda, Maryland this 6th day of October, 1986.

FOR THE NUCLEAR REGULATORY COMMISSION



Lester S. Rubenstein, Director
PWR Project Directorate #2
Division of PWR Licensing-A
Office of Nuclear Reactor Regulation